ABSTRACT OF THE DISCLOSURE

An implant assembly is provided for surgical implantation into an intervertebral space, such as for stabilization of vertebrae adjacent the intervertebral space during a spinal fusion procedure. The implant assembly includes a primary segment separate from a secondary segment. These segments are elongate and of sufficiently small cross-section that they can be implanted posteriorly in a minimally invasive manner. The primary segment preferably includes a tunnel and the secondary segment preferably includes a neck with the tunnel and neck sized complementally so that the segments stabilize each other where they intersect with the neck within the tunnel. The entire implant assembly is thus provided which both widens and supports the intervertebral space and is sufficiently rigid to provide adequate support for the intervertebral space as the vertebrae are fusing together.